REMARKS

Claims 34-54 have been cancelled herein without prejudice to their later prosecution in this or another application. Claims 1-5, 7, 9-11, 13, 19, 21, 24-27, 30-32, and 60 have been amended. Claims 61 and 62 have been added. Since all of these inventions are reasonably conveyed by the specification and original claims, there is no issue of new matter. Upon entry of this amendment, Claims 1-33, and 55-62 are pending.

Election/Restriction

Applicants thank the Examiner for acknowledging the election with traverse of a "liquid" sample and further indication that the Examiner will rejoin and search for the gas samples upon indication of allowable subject matter..

Drawings

The drawings have been objected to. Specifically the Office states that Figure 1 does not clearly identify each of the elements listed (a) through (g) because the letters (a) through (g) appear to be "floating." Accordingly, Applicants provide herewith a replacement Figure 1, which more clearly points out the features (a) through (g). A line with an arrow is added between each letter and its corresponding element to solve the "floating" issue. Applicants request that the objection be withdrawn.

Rejections under 35 U.S.C. §112

112, First Paragraph

Claims 1-33 and 55-60 are rejected under 35 U.S.C. 112, first paragraph, as allegedly failing to comply with the written description requirement. Specifically, the Office questions the location of support for a measuring cell comprising both a "fluid" and a "sample". As noted in the specification, a fluid can be a sample comprising a target. Alternatively, the fluid may be a liquid or gas that is not the sample, e.g., a buffer. While Applicants believe that the claims are clear as written, they have been

amended herein, rendering the rejection moot. Applicants respectfully request that the rejection be withdrawn.

112, Second Paragraph

Claims 1-33 and 55-60 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for allegedly omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structure connections. Specifically the Office states that whether/how the tube guides light through a fluid contained within a measuring cell is not clear. The Office further states the structural cooperative relationship between "tube" versus "fluid" and between "tube" versus "fluid contained within the at least one measuring cell" appears to be omitted from claims 1 and 13. Applicants traverse this rejection.

Although Applicants believe that the claims are not indefinite, in an effort to expedite prosecution, the claims have been amended herein to more clearly specify the relationship between the at least one tube and the fluid. Applicants respectfully request that the rejection be withdrawn.

Claims 13-33, 59, and 60 are rejected under 35 U.S.C. 112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claims the subject matter which the Applicants regard as the invention. Specifically the Examiner objects to the phrase "the at least one fluid dispensing element dispenses the sample to the at least on measuring cell" in claim 13. Given the amendments to the claims, Applicants respectfully maintain that the rejection is moot. Applicants request that the rejection be withdrawn.

Claim 13 has also been rejected under 35 U.S.C. 112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claims the subject mater which the Applicants regard as the invention. Specifically, the Office has expressed concern regarding the antecedent basis for the phrase "the at least one

capture agent" in claim 13. Applicants have amended the claims herein to address the Office's concerns. Applicants request that the rejection be withdrawn.

Rejections under 35 U.S.C. §102

Claims 1-14, 16-18, 20, 21, 24-33, and 55-60 are rejected under 35 U.S.C. 102(b), as allegedly being anticipated by Liu, U.S. Patent No. 6,020,207 (hereinafter '207 patent). Claims 1-6, 9, 11-18, 21, 24-28, 30, 32, 33, 55-58, and 60 are rejected under 35 U.S.C. 102(b) as allegedly being anticipated by Bohnenkamp, U.S. Patent No. 6,252,657 (hereinafter '657 patent). Again, Applicants traverse those rejections.

Liu describes a tube of optically transparent material coated on its exterior surface with an amorphous polymer material 14 having a refractive index which is lower than that of the liquids which fill the inside of the tube (see *e.g.*, col. 2, lines 61-67). Liu further states that the refractive index of the coating will desirably be less than 1.33 so that the core liquid of the tube may be an aqueous solution (see *e.g.*, col. 3, lines 1-3). Liu also discloses that "the capillary tubing 12 will have a refractive index which is equal to or greater than the refractive index of the core liquid" (see *e.g.*, col. 3, lines 24-25).

Liu does not teach or fairly suggest embodiments without an external coating. Indeed, that external coating is key to the success of Liu's device. That is, the Liu device is comprised of (1) a liquid inside the tube wherein the liquid has a rerefractive index less than or equal to that of the tube; (2) the tube; and (3) an external coating having a refractive index lower than the liquid inside the tube and hence, a refractive index lower than the tube. Consequently, the tube has the highest refractive index of those component parts and light will be guided inside the walls of the tube because that tube is the high refractive index core of the waveguide.

As such, Liu does not teach or fairly suggest a measuring cell comprising at least one tube capable of guiding light through a fluid in the inner volume of said at least one tube. As Liu does not teach such an embodiment, it does not anticipate the pending claims. Applicants request that the rejection be withdrawn.

Bohnenkamp is cited as teaching a light guiding device such as a capillary with a first and second opening wherein analytes are fixed on the inner surface of the capillary. Bohnenkamp does not teach or fairly suggest measuring cell comprising at least one tube capable of guiding light through the interior of said at least one tube, wherein the ability of said at least one tube to guide light through the interior of said at least one tube is either due to the structure of the inner surface of the tube, is due to an inherent property of the material used to construct the tube, or is a result of features designed within the material building the tube. Rather, it is the capillary of Bohnenkamp that serves as the means to guide light. Indeed, Bohnenkamp states that "...the light penetrates the capillary" and that "the capillary constructed from light guiding material for the light that is excited in the area of the evanescent field, and the refractive index of an inner coating on the capillary being smaller than the refractive index of the capillary material."

Bohnenkamp does not teach or fairly suggest a measuring cell comprising at least one tube capable of guiding light through a fluid in the inner volume of said at least one tube. As Bohnenkamp does not teach such an embodiment, it does not anticipate the pending claims. Applicants request that the rejection be withdrawn.

Rejections under 35 U.S.C. §103

Claims 1-14, 16-33, and 55-60 are rejected under 35 U.S.C. 103(a) as allegedly being obvious over Gilby et al., U.S. Patent No. 5,184,192 (hereinafter '192 patent) in view of Liu, '207 patent.

Gilby describes a tube coated on its internal surface with a thin layer of fluoropolymers having refractive index as low as 1.29 wherein light can be guided axially along a liquid filled said tube (see *e.g.* col. 2, lines 44-50). Gilby does not teach or fairly suggest that the inner surface can also be coated with at least one binding agent capable of binding at least one target from a sample, as claimed herein. Indeed, Applicants respectfully maintain that application of such a coating could be detrimental to Gilby's tube. More specifically, Gilby reiterates on numerous occasion the importance of the fluoropolymer layer to the performance of its device and does not

describe the use of a coating having at least one binding agent. For example, Gilby states that "[t]hese polymers have a unique combination of properties." See, col. 2, lines 48-52. Further, "[t]he combination of low index . . . and excellent transparency . . . allow as the formation of an efficient, axially-illuminated flow cell for visible/ultraviolet absorbance measurements." See, col. 2, line 63 to col. 3, line 1. The use of a coating with at least one binding agent capable of binding at least one target from a sample, as claimed herein, simply would not have been obvious from Gilby, which requires the use of a fluoropolymer coating.

Liu does not rectify Gilby's deficiency for at least the reasons stated above. Hence, the pending claims would not have been obvious over Gilby and Liu, either alone or in combination. Applicants respectfully request those rejections be withdrawn.

Double Patenting

Claims 1-33 and 55-60 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as allegedly being unpatentable over claims 1-8, 10-30, and 32-35 of copending Application No. 10/572,931, in view of Hawes, U.S. Patent No. 3,556,659 (hereinafter '659 patent).

As none of the conflicting claims have been allowed, Applicants request that the Office hold this rejection in abeyance until allowance of conflicting claims. Applicants will take appropriate action at that time.

CONCLUSION

In view of the foregoing amendments and remarks, Applicants respectfully requests reconsideration and reexamination of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to Deposit Account No. 06-0916.

Respectfully submitted,

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